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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,719	01/05/2006	Hideaki Yamamoto	B588-596 (25815.609)	1517

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COWAN LIEBOWITZ & LATMAN P.C.
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NEW YORK, NY 10036

EXAMINER

ARCIERO, ADAM A

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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01/07/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,719	Applicant(s) YAMAMOTO, HIDEAKI	
	Examiner ADAM A. ARCIERO	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 15-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/16/09; 80/20/08; 05/27/08; 01/05/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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FUEL CELL DEVICE CAPABLE OF OUTPUTTING A SIGNAL REPRESENTING A RESIDUAL CAPACITY, METHOD FOR OUTPUTTING A SIGNAL REPRESENTING A RESIDUAL CAPACITY OF A FUEL CELL DEVICE, AND ELECTRONIC DEVICE CAPABLE OF DETECTING A RESIDUAL CAPACITY OF A FUEL CELL DEVICE

Examiner Adam Arciero

S.N. 10/563,719

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January 2, 2009

Election/Restrictions

1. Applicant's election without traverse of Group III, claims 11-14, in the reply filed on October 23, 2009 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (JP 2003-139298) in view of Kanazawa (JP 59-197546).

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As to Claim 11, Ito et al. disclose an electronic device capable of detecting a residual capacity of a fuel cell device (Abstract). Said fuel cell device comprises a first tank section comprising a first hydrogen storage material and a second tank comprising a second hydrogen storage material, said tanks comprising respective pressure sensors (pressure detecting units) and flow rate control parts (Abstract). Said first and second hydrogen storage materials have different characteristics from each other (Abstract). Ito et al. further disclose a residual amount detecting unit for detecting a residual hydrogen amount by using the pressure measurements and by controlling the flow rates of the hydrogen from both the first hydrogen storage unit and the second hydrogen storage unit (Abstract). Ito et al. disclose a control unit which controls the operations of the fuel cell and the calculations for determining the residual amount of hydrogen (Abstract). Ito et al. does not specifically disclose wherein the fuel cell system comprises a tank for accommodating at least two kinds of hydrogen storage alloys, and wherein the control unit operated with the electric power supplied from the fuel cell.

However, Kanazawa teaches of a fuel tank comprising a mixture of two different kinds of hydrogen storage alloys (Abstract). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Ito et al. with one tank comprising a mixture of two different kinds of hydrogen storage materials, because Kanazawa teaches that such a setup makes it possible to simply perform the indication of a hydrogen residual amount by simple pressure measurements (Abstract). Furthermore, the courts have held that using one piece rather than multiple pieces to perform the same function is within the skill of one ordinary skilled in the art *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

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As to Claim 12, Ito et al. does not specifically disclose wherein the fuel cell system comprises a tank for accommodating at least two kinds of hydrogen storage alloys, and wherein the control unit operated with the electric power supplied from the fuel cell.

However, Kanazawa teaches of a fuel tank comprising a mixture of two different kinds of hydrogen storage alloys (Abstract). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Ito et al. with one tank comprising a mixture of two different kinds of hydrogen storage materials, because Kanazawa teaches that such a setup makes it possible to simply perform the indication of a hydrogen residual amount by simple pressure measurements (Abstract). Furthermore, the courts have held that using one piece rather than multiple pieces to perform the same function is within the skill of one ordinary skilled in the art *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

As to Claim 13, Ito et al. disclose two separate tanks for accommodating two different types of hydrogen storage alloys. Ito et al. does not disclose one discrete tank with two separate spaces to accommodate the two different hydrogen storage alloys separately. However, the courts have held that using one piece rather than multiple pieces to perform the same function is within the skill of one ordinary skilled in the art *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (JP 2003-139298) in view of Kanazawa (JP 59-197546) as applied to claims 11-13 above, and further in view of Dickman et al. (US 2001/0049038 A1).

As to Claim 14, the combination of Ito et al. and Kanazawa does not specifically disclose

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a display.

However, Dickman et al. teach a control system for a fuel cell system, said control system comprises a user interface having a display (pg. 7, [0064]). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Ito et al. and Kanazawa with a user interface and display, because Dickman et al. teach that such a display may show current values measured by sensors of the system, enabling a user to monitor and/or interact with the operations (pg. 7, [0064]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM A. ARCIERO whose telephone number is (571)270-5116. The examiner can normally be reached on Monday to Friday 8am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

./Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795